

6. (new) A method as claimed in claim 4, wherein said plurality of neural networks further comprises sets of neural networks used for counter-checking results, each one of said sets of similar neural networks corresponding to each one of said plurality of defects to be detected.

7. (new) A method as claimed in claim 4, wherein processing said at least one image further comprises processing said at least one image according to a selected set of image analysis techniques, said set of image analysis techniques selected as a function of said defects to be detected.

8. (new) A method as claimed in claim 7, wherein n sets of neural networks are used to detect n types of defects.

A 9. (new) A method as claimed in claim 8, wherein:
said item under inspection is a sewer pipe;
n corresponds to 5; and
said plurality of defects are deposits, cross-sectional reductions, misalignments, infiltration, and cracks.

10. (new) A method as claimed in claim 9, wherein deposits, cross-sectional reductions, and misalignments correspond to a first set of image analysis techniques, infiltration corresponds to a second set of image analysis techniques, and cracks correspond to a third set of image analysis techniques.

11. (new) A method as claimed in claim 10, wherein said first set of image analysis techniques comprises the operations of inversion, dilation, background subtraction, thresholding, segmentation, and analysis.

12. (new) A method as claimed in claim 10, wherein said second set of image analysis techniques comprises the operations of dilation, background subtraction, thresholding, segmentation, and analysis.

13. (new) A method as claimed in claim 10, wherein said third set of image analysis techniques comprises the operations of background subtraction, edge detection, dilation, thresholding , and analysis.

14. (new) A method as claimed in claim 4, wherein said neural networks are back-propagation neural networks.

A. 15. (new) A method as claimed in claim 4, wherein said acquiring an image comprises using a closed circuit television camera and a videotape.

16. (new) A method as claimed in claim 13, wherein said videotape is digitized.

17. (new) A method as claimed in claim 6, wherein each set of neural networks comprises at least three neural networks used for counter-checking results.

18. (new) A method as claimed in claim 4, further comprising determining a position of said objects in said item under inspection.

19. (new) A method as claimed in claim 5, further comprising recommending a rehabilitation technique based on said report and a set of attributes of said item under inspection.

20. (new) A method as claimed in claim 19, wherein said attributes are part of a group comprising technical requirements, contractual requirements, and cost effectiveness.

21. (new) A method as claimed in claim 19, wherein a plurality of rehabilitation techniques are recommended.

22. (new) A method as claimed in claim 21, further comprising ranking said plurality of recommended rehabilitation techniques.

23. (new) A method for detecting a selected defect in an item under inspection comprising:

acquiring an image of said item;

providing a neural network for detecting said selected defect;

selecting a set of image analysis techniques as a function of said selected defect;

processing said image according to said selected set of image analysis techniques for said selected defect to produce a processed image having objects isolated from an image background of said image;

inputting said processed image to said neural network to obtain information corresponding to said selected defect.

24. (new) A method as claimed in claim 23, further comprising issuing a report based on outputs produced by said neural network.

25. (new) A method as claimed in claim 23, wherein said providing a neural network further comprises providing a set of neural networks, said set of neural networks being used for counter-checking results.

26. (new) A method as claimed in claim 25, wherein said set of neural networks comprises three neural networks.

27. (new) A method as claimed in claim 23, wherein said selected defect is selected from a group comprising deposits, cross-sectional reductions, misalignments, infiltration, and cracks.

28. (new) A method as claimed in claim 27, wherein deposits, cross-sectional reductions, and misalignments correspond to a first set of image analysis techniques, infiltration corresponds to a second set of image analysis techniques, and cracks correspond to a third set of image analysis techniques.

29. (new) A method as claimed in claim 28, wherein said first set of image analysis techniques comprises the operations of inversion, dilation, background subtraction, thresholding, segmentation, and analysis.

30. (new) A method as claimed in claim 28, wherein said second set of image analysis techniques comprises the operations of dilation, background subtraction, thresholding, segmentation, and analysis.

31. (new) A method as claimed in claim 28, wherein said third set of image analysis techniques comprises the operations of background subtraction, edge detection, dilation, thresholding , and analysis.

32. (new) A method as claimed in claim 23, wherein said neural network is a back-propagation neural network.

33. (new) A method as claimed in claim 23, wherein said acquiring an image comprises using a closed circuit television camera and a videotape.

34. (new) A method as claimed in claim 33, wherein said videotape is digitized.